

**ATTACHMENT J.4.101**

**QA RULE IMPLEMENTATION PLAN**

**PL-3029**

CONTROL NO. FED-3730

DOCUMENT NO. PL-3029

REVISION NO. 1

## QA RULE IMPLEMENTATION PLAN

### FEMP QUALITY ASSURANCE NUCLEAR SAFETY REQUIREMENTS per 10 CFR PART 830.120

PL-3029

Supersedes Revision 0

Effective Date: 11/30/97

AUTHORIZED BY:

B.D.Varchol

Brinley D. Varchol, Quality Assurance FAM

11/21/97

Date

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Fluor-Daniel Fernald  
P.O. Box 538704  
Cincinnati, Ohio 45253-8704

## QA RULE IMPLEMENTATION PLAN

### TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
1.0 General Information and Definitions .....	1
2.0 Standards/Requirements Identification Document (S/RID) .....	6
3.0 Graded Approach, Baseline and Implementation Activities .....	6
4.0 Milestones and Schedules .....	9
5.0 Resource Assessment .....	9
6.0 Equivalency Determination .....	10
7.0 Exemptions .....	10
8.0 Prioritization Process .....	11
9.0 Compensatory Action .....	12
10.0 Tracking .....	12
11.0 Standards .....	12
12.0 Discussion of the QA Program, and Review, Approval and Maintenance of the Quality Assurance Rule Implementation Plan (QARIP) .....	13
13.0 Attachments .....	18

## **ISSUE AND REVISION SUMMARY**

<b>REVISION</b>	<b>DATE</b>	<b>DESCRIPTION OF ISSUE OR REVISION</b>
0	11-30-94	This is a new document.
1	11-30-97	Organizational updates, administrative corrections, and editorial corrections. Also incorporates change notices: SC95-003, SC95-004, SC95-005, IC96-020, and IC96-021

## 1.0 General Information and Definitions

### 1.1 Facility History

The Department of Energy (DOE) facility at Fernald, Ohio, was built in the early 1950s by the U.S. Atomic Energy Commission to process uranium ore concentrates into high-purity uranium-metal products. National Lead Company of Ohio (later renamed NLO, Inc.) was the management and operations (M&O) contractor from 1951 to 1986. In 1986, the Westinghouse Materials Company of Ohio (later the Westinghouse Environmental Management Company of Ohio) assumed this management and operations contract. In 1989, Westinghouse and DOE suspended uranium production operations at Fernald and placed a new focus on environmental restoration for the Fernald site.

In 1991, DOE permanently terminated production operations, reorganized the Fernald site to reflect its environmental restoration mission, and changed the name of the site to the Fernald Environmental Management Project (FEMP). On December 1, 1992, the Fernald Environmental Restoration Management Corporation (FERMCO) assumed responsibility for the FEMP under a new contract structure, which is now called a Performance Based Contract (PBC). In contrast to the previous M&O contracts, the PBC holds FERMCO responsible for the management of all work in conducting environmental remediation of the FEMP within applicable laws, regulations, DOE Orders and commitments.

### 1.2 Purpose and Scope

The purpose of the Quality Assurance Rule Implementation Plan (QARIP) is to provide detailed information necessary for Fluor-Daniel Fernald (FDF) to implement [through the Quality Assurance Program (QAP)] the requirements of 10 CFR Part 830.120, *Quality Assurance Requirements*, at the FEMP. FDF has developed the QARIP to support the FDF Mission, which states: "Together, DOE and Fluor Daniel Fernald are committed to safely restoring the Fernald site to an end state which serves the communities' needs, and we will do this within a decade."

FDF has primary responsibility for compliance with nuclear safety requirements. DOE expects FDF to have direct responsibility for Quality Assurance (QA) Rule implementation and for appropriate articulation of nuclear safety requirements for subcontractor and supplier (S&S) activities, to maintain compliance with the QA Rule. FDF incorporates these requirements into appropriate contract documents.

The QARIP combines brief textual descriptions of key elements with tables and matrices that further detail the compliance documents, compliance activities, milestones, and compensatory action (if required) needed to implement the QA Rule.

The QARIP incorporates the philosophy of *Graded Applicability Based on Safety-Significance*. FDF will apply its QAP to the entire site on a **Graded Approach** (which is defined below and expanded in Section 3.0) and will prioritize those facilities and activities which have the greatest safety significance. Enforcement by DOE will be related to violations of Nuclear Safety Requirements in accordance with 10 CFR Part 820 *Procedural Rules for DOE Nuclear Activities*.

Despite broad application of the QAP at the FEMP, FDF's commitment to implement the QA Rule is confined to two activities - Safe Shutdown Operations and Material Handling and Storage -conducted in existing facilities rated as Nuclear Hazard Category (HC) 1, 2, or 3 and documented in accordance with the *FDF Safety Analysis Report/Technical Safety Requirement (SAR/TSR) Implementation Plan*. (A list of these facilities, derived from FEMP-2352, *FEMP Hazard Survey and Preliminary Hazard Categorization*, can be found in Attachment 4 of this document). FDF also commits to implement the QA Rule for future project-specific nuclear activities (other than the two generic activities) which occur in a facility or activity rated HC1, 2, or 3 in an approved Safety Analysis Report (SAR). Facilities included in this are: the UNH Neutralization Project, the completed Thorium Overpack Project, and the Vitrification Pilot Plant operations. FDF realizes, however, that if noncompliances or deficiencies occur in radiological facilities or in non-nuclear facilities or activities and lack of corrective action could lead to violations of Nuclear Safety Requirements in higher hazard nuclear facilities, then the potential for enforcement increases accordingly.

The potential for enforcement is outlined below:

NUCLEAR FACILITY OR ACTIVITY <u>HAZARD CATEGORY</u>	10 CFR 830.120 <u>ENFORCEMENT POTENTIAL</u>
1	High
2	Moderate
3	Low
Radiological Facility	None

#### NON-NUCLEAR FACILITY OR ACTIVITY

High Hazard Class	None
Moderate Hazard Class	None
Low Hazard Class	None
Industrial Facility	None

#### 1.3 Definitions (Source)

Activity - any program, project, or operation undertaken to plan, manage, integrate, or execute an environmental assessment, remedial design, remedial action, technology development, base function, or decontamination and decommissioning action.

Administrative Controls - See RM-0012, *Quality Assurance Program*, Appendix C

---

Certification (Personnel) - the process by which contractor nuclear facility management provides written endorsement of the satisfactory achievement of qualification of a person for a position (10 CFR 830.3/91).

Compensatory Actions - interim measures taken by a contractor pending full compliance with or imminent non-applicability of a particular provision of the QA Rule.

Compliance Activity - See RM-0012, *Quality Assurance Program*, Appendix C.

Compliance Assessment - an assessment to determine level of compliance with requirements including the QA Rule (contrast Performance Assessment).

Contractor - any person under contract, including subcontractors or suppliers, to the Department of Energy with the responsibility to perform activities or to supply services or products that are subject to *DOE Nuclear Safety Requirements* (10 CFR 820.2).

DOE Nuclear Safety Requirements - the set of enforceable rules, regulations, or orders relating to nuclear safety adopted by DOE (or by another agency if DOE specifically identifies the rule, regulations, or order) to govern the conduct of persons in connection with any DOE nuclear activity and includes any programs, plans, or other provisions intended to implement these rules, regulations, orders, a Nuclear Statute or the Atomic Energy Act, including technical specifications and operational safety requirements for DOE nuclear facilities. For purposes of the assessment of civil penalties, the definition of *DOE Nuclear Safety Requirements* is limited to those identified in 10 CFR 820.20(b) (Ref. 10 CFR 820.2)

Enforcement - the process by which DOE investigates the nature and extent of violations of the DOE Nuclear Safety Requirements, determines whether a violation has occurred and imposes an appropriate remedy, including possible assessment of a civil penalty. The process also provides for the identification of criminal violations of the Atomic Energy Act or DOE Nuclear Safety Requirements and the referral of such violations to the Department of Justice in accordance with 10 CFR Part 820, Subpart F (10 CFR Part 820, Subpart B, *Enforcement Process §820.20 - Purpose and Scope*).

Exemption - the final order that sets forth the relief, waiver, or release, either temporary or permanent, from a DOE Nuclear Safety Requirement, as granted by the appropriate Secretarial Officer pursuant to the provisions of Subpart E 10 CFR Part 820 (10 CFR 820.2).

Facility - any equipment, structure, system, process, or activity that fulfills a specific purpose.

Hazard Category - the classification of a facility or activity based on its radiological hazard. See RM-0012, *Quality Assurance Program*, Appendix D for specific information regarding Hazard Categories (HCs) 1-3 and radiological facilities (10 CFR Part 830.110(e), *Hazard Classification for DOE Nuclear Facilities and Operations*).

Hazard Class - the classification of a non-nuclear facility or activity which contains hazardous material in excess of that specified in 40 CFR Part 302.4 *Designation, Reportable Quantities, and Notification*, per § 102.6 of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)*. See Appendix D of the RM-0012, Quality Assurance Program for specific information regarding High, Moderate, and Low Hazard Class.

Hazardous Substance or Material - See RM-0012, *Quality Assurance Program*, Appendix C.

Implementation Activity - Same as compliance activity.

Industrial Facility - See RM-0012, *Quality Assurance Program*, Appendix C.

Non-Reactor Nuclear Facility - See RM-0012, *Quality Assurance Program*, Appendix C.

Nuclear Facility - See RM-0012, *Quality Assurance Program*, Appendix C.

Nuclear Statute - any statute or provision of a statute that relates to a DOE nuclear activity and for which DOE is responsible (10 CFR 820.2).

Occurrence Report - a documented evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications and to evaluate the actions being proposed or employed to correct the event or condition or to avoid recurrence (10 CFR 830.3/91).

Performance Assessment - an assessment to determine the level of attainment of business goals and objectives, as well as the effectiveness and efficiency of systems. Compliance assessment is normally either a precursor to or a subset of performance assessment (Contrast Compliance Assessment).

Performance Grade (PG) - the classification of an activity or function of a system, structure, or component (SSC) associated with a nuclear or non-nuclear facility in terms of:

- Safety Considerations involving the consequences of its failure to prevent or mitigate the release of radioactive materials or energy, or hazardous materials, and
- Mission Importance Considerations involving the consequences of its failure impacting schedule delay, stakeholder reaction, or project cost, and
- Life-Cycle Considerations involving the design life or intended use/consequence of the SSC or Activity, and
- Complexity Considerations involving the degree of regulatory, design, construction, process, and/or management coordination required. (CM-0001, *Configuration Management*)

Quality - See RM-0012, *Quality Assurance Program*, Appendix C.

Quality Assurance - See RM-0012, *Quality Assurance Program*, Appendix C.

Quality Level - See RM-0012, *Quality Assurance Program*, Appendix C.

Quality Rule - See RM-0012, *Quality Assurance Program*, Appendix C.

Quality Assurance Program or (QAP) - See RM-0012, *Quality Assurance Program*, Appendix C.

Record - See RM-0012, *Quality Assurance Program*, Appendix C.

Release - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type of receptacle containing substances or the stockpiling of a reportable quantity of a hazardous substance in unenclosed containment structures (10 CFR 830.3/91).

Risk - See RM-0012, *Quality Assurance Program*, Appendix C.

Safety Analysis - a documented process: (1) To provide systematic identification of hazards within a given DOE operation; (2) to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and (3) to analyze and evaluate potential accidents and their associated risks (10 CFR 830.3/91)

Safety Analysis Report (or SAR) - a report that documents the adequacy of safety analysis for a nuclear facility to ensure that the facility can be constructed, operated, maintained, shut down, and decommissioned safely and in compliance with applicable laws and regulations (10 CFR 830.3/91).

Safety Basis - the combination of information relating to the control of hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely (10 CFR 830.3/91)

Service - See RM-0012, *Quality Assurance Program*, Appendix C.

Standard Industrial Hazards - hazards that are routinely encountered in general industry and for which national consensus codes and/or standards (e.g., Occupational Safety and Health Agency, transportation safety, etc.) exist to guide safe design and operation without the need for special analysis to define safe design and/or operational parameters.

Standards/Requirements Identification Document (S/RID) - the document that establishes the requirements with which FDF must comply, including regulations, Orders, and mandatory guidance. It comprises 24 functional areas.

Technical Safety Requirements (or TSRs) - those requirements that define the conditions, safety boundaries, and the management or administrative controls necessary to ensure the safe operation of a nuclear facility and to reduce the potential risk to the public and facility workers from uncontrolled releases of radioactive materials or from radiation exposures due to inadvertent criticality (10 CFR 830.3/912; DOE Order 5480.23).

## 2.0 Standards/Requirements Identification Document (S/RID)

An S/RID, in addition to listing requirements, also includes interfaces among the functional areas.

The PBC requires that FDF be accountable for complying with applicable laws, regulations and DOE orders, and be financially responsible for any avoidable costs incurred. The S/RID specifies which laws, regulations, DOE orders, and industry standards are mandatory.

The Fluor Daniel Fernald Management Plan: Policies and Requirements Manual, RM-0016, contains the S/RID.

The Quality Assurance Functional Area portion of the FDF S/RID includes the programmatic requirements that ensure risks and environmental impacts are minimized, and that safety, reliability, and performance are maximized through the application of effective management systems commensurate with the risks posed by the facility and its operations.

## 3.0 Graded Approach, Baseline and Implementation Activities

### 3.1 Graded Approach

To ensure the most efficient use of resources, a graded approach is used to determine the degree to which the QA management system is applied to a specific facility, activity, or structure, system, or component (SSC). This approach supports the FDF mission by providing appropriate comprehensive quality assurance (safe and final cleanup, within applicable DOE orders, regulations, and commitments) with justification for the level of effort involved (least-cost and earliest cleanup).

The graded approach and the establishment of Quality Levels are used to determine the appropriate level of effort necessary to implement the requirements of 10 CFR Part 830.120, and are not used to obtain relief from the requirements.

The Safety Analysis Section of the Safety & Health (S&H) Department determines the Hazard Category for facilities and activities at the FEMP in accordance with DOE Order 5480.23, *Nuclear Safety Analysis Reports*. The safety analysis documentation provides the rationale for determining the hazard category for that facility or activity.

The Engineering Organization has overall responsibility for assigning Performance Grades (PGs) to SSCs, based on:

- nuclear and non-nuclear safety significance;
- project importance relative to the FDF Mission;
- design life of the SSC; and
- project complexity.

FDF establishes Quality Levels based on HCs for facilities or activities, and on PGs for SSCs. These Quality Levels determine the appropriate level of effort FDF will allocate in order to assure quality. The relationships between HCs and Quality Levels, and those between PGs and Quality Levels, are shown in the tables below. The shaded regions indicate FDF's commitment to implement the QA Rule.

Since Quality Level 3 is the basic Quality Management System that implements the QAP requirements of 10 CFR Part 830.120, all organizations will operate under a Quality Level 3 program at a minimum. If these organizations are involved in a specific activity or task which is deemed to be at a higher Quality Level (1 or 2), then they will apply the appropriate resources required by that Quality Level. Quality Level 4 is not intended to implement all QAP requirements for site facilities or activities. Rather, it applies to work processes, or purchased services or commercial-grade items, which are not safety-significant. QA requirements for Quality Level 4 items or services are listed in project-specific plans or the purchase order.

The QAP includes specific requirements associated with the four Quality Levels. These requirements are documented in the *Application of Quality Levels to QA Program Criteria* chart, of the RM-0012, Quality Assurance Program, Appendix D, Attachment D2. Appropriate QA elements will be applied to each facility, activity and SSC in accordance with the Quality Level established in the appropriate table (1, 2, or 3) and the requirements documented in RM-0012. The activities and programs required by the QAP implement the provisions of the QA Rule. This information is documented further in both Section 12 and Attachment 2 of this QARIP.

Table 1 - Quality Levels for Existing FEMP Nuclear Activities

NUCLEAR ACTIVITY	QUALITY LEVEL FOR WRITTEN PROGRAM
1. Safe Shutdown Operations	2
2. Material Handling and Storage	2

Shading indicates activities for which FDF is implementing the QA Rule, when performed in HC1, 2, or 3 facilities.

Table 2 - Quality Levels for Future FDF Nuclear Activities with DOE-Approved SAR

NUCLEAR HAZARD CATEGORY	QUALITY LEVEL FOR WRITTEN PROGRAM
HC1	QL-1
HC2	QL-2*
HC3	QL-3*
Radiological Facility	QL-4*

Shading indicates future activities to which the QA Rule will be applied, based on an approved SAR for that activity. (See first paragraph, Page 2, for description of future project-specific activities)

\*Special projects and facilities may have their Quality Level upgraded based on a formal process established in site procedures.

Table 3 - Quality Levels for Structures, Systems, and Components (SSCs) in Nuclear Facilities

PERFORMANCE GRADES	QUALITY LEVEL FOR SSC
PG-1	QL-1
PG-2	QL-2*
PG-3	QL-3*
PG-4	QL-4*
PG-5	QL-4*

Shading indicates SSCs for which the QA Rule is implemented for those facilities or activities shaded in Tables 1 & 2.

\*During the performance grading process, the technical review team may establish a higher Quality Level based on special considerations.

### 3.2 Baseline and Implementation Activities

In order to implement the QA Rule without duplicating efforts under the existing QAP, a baseline evaluation was performed on the program. This evaluation determined the extent to which the present QAP meets the requirements of the QA Rule. Any changes to the present program resulting from DOE review shall be reassessed.

The method used to evaluate the implementation of the QA Rule at the FEMP is shown in *QA Rule Implementation Plan/Compliance Evaluation Process*, Attachment 1. The compliance evaluation process is designed with three steps:

- 1) a sitewide program assessment (Attachment 2, Matrix 1);
- 2) facility or activity program assessments (Attachment 3, selections from Matrices 2A and 2B as shown in PL-3029, Revision 0); and
- 3) facility or activity compliance assessments.

The Step 3 compliance assessments will be incorporated into the FDF Audits and Appraisals System.

The activities listed in the shaded region of Table 1, Page 7 (i.e., those which occur in HC 1, 2, or 3 facilities), are existing nuclear activities for which FDF is committed to implement the QA Rule. The QA Rule will also be implemented for future project-specific activities as indicated in the first paragraph, Page 2. This implementation will be assessed in accordance with Step 2, and published as a correspondence from the FDF President to the Field Manager of DOE-FEMP. This correspondent will document FDF's level of compliance with the QA Rule in these future facilities. It will neither modify nor revise FDF's QAP nor its *Rule Implementation Plan*.

Facilities which are inactive and scheduled to be demolished will be categorized by current inventory. The application of a graded QAP will be based on that evaluation. The only resources applied to institute the requirements of this Implementation Plan for inactive facilities are those which ensure that adequate control is placed on access to the facility, and that monitoring requirements are based on regulatory agreements.

#### 4.0 Milestones and Schedules

The Compliance Activities identified in Section 3.0 are summarized (in Attachment 4 as shown in PL-3029, Revision 0) from an evaluation of compliance documented in matrices 1 & 2. These summary sheets assign specific milestones and schedules to these activities. Compliance activities are those actions necessary to implement the referenced section of the QA Rule. The scheduled completion dates for each documented compliance activity (during step 1 and 2) in Attachments 2 & 3 (PL-3029, Revision 0) were shown as a "Milestone" for that compliance activity. Compliance activities resulting from the performance assessment (step 3) will be documented in the audit report and resulting corrective action plans. The assessment conducted during Steps 1 and 2 identified three major compliance activities (documented in Attachment 4 of PL-3029, Revision 0) which were necessary to bring FDF into compliance with the QA Rule. These activities were scheduled and completed in accordance with the milestone dates documented in Attachment 4 of PL-3029, Revision 0).

The *QA Compliance Assessment* documented in Attachment 2 is based on the FDF QAP, Revision 3.

The QAP (Revision 4) involves only minor administrative changes and a complete new assessment of compliance to Revision 4 of the QAP is not required at this time.

Ongoing assessments of the QA requirements are conducted in accordance with the QAP which requires nonconforming conditions to be tracked, trended, and dispositioned.

#### 5.0 Resource Assessment

The resources necessary to implement the QA Rule are almost exclusively personnel costs, with a minimal allowance for administrative costs. The QA Rule requires no capital expenditures; its source is entirely operating budget dollars.

The human resources needed to enact the QA Rule requirements can be divided into three categories. First, people must revise the current QAP and develop the QARIP to institute the requirements of the Rule. Second, people must be trained to understand the Rule's provisions so that they may follow them. Third, people must manage the process, including performing corrective actions and coordinating (and, where possible, integrating) with other Rules governed by the Price-Anderson Amendments Act of 1988 (PAAA), to prevent duplication of effort and confusion of requirements. The administrative costs are those normally associated with compliance with any new requirement: costs of publishing this implementation plan (paper, copying, and distribution) are the main contributors to this category.

FDF estimated its cost to revise the QAP and develop the QARIP at approximately 2,400 man-hours (not including sunk costs to date). Training on the Rule's provisions is estimated at another 750 man-hours. The cost of managing the process is estimated at 3,600 man-hours. Administrative costs are liberally estimated at \$10,000. These costs were essentially included in the FDF FY95 budget. The primary impact will be one of opportunity costs, i.e. other, lower-priority work delayed or diminished in scope in order to accommodate this project. The cost of compliance activities has been factored into subsequent FDF fiscal year work schedules. No additional funds are required.

Since the QA Rule merely codifies the quality assurance requirements, and since FDF has an approved QAP, adoption of the QA Rule shall effectively add no additional life cycle costs. Benefits will be realized through a refocus on the graded approach and a consistent application of QA requirements. A stable rule-making process will also add value to contractor programs.

## 6.0 Equivalency Determination

FDF does not plan to propose alternative methods for implementing the requirements identified in 10 CFR Part 830.120. The requirements of the QA rule will be applied to the site in areas with nuclear safety significance on a graded approach in accordance with the process established by this implementation plan.

## 7.0 Exemptions

FDF does not plan to seek relief, waiver, or release (either temporary or permanent) from the Nuclear Safety Requirements of 10 CFR Part 830.120. However, ongoing evaluations of new/existing facilities, the cost or practicality of implementing the requirements, or further resource assessments may result in future decisions to seek an exemption from some QA requirements. If this occurs, FDF will follow the provisions for exemptions as stated in 10 CFR Part 820.60, *Exemption Relief*.

## 8.0 Prioritization Process

In order to make the best use of resources available, a prioritization system was developed for the QA Rule Implementation and its periodic assessment. This process is based on the appropriate application of resources that will produce maximum benefit to the FEMP and the DOE.

Implementation priorities have been established based on the potential risk to the health and safety of workers and the public and the protection of the environment.

- |            |   |
|------------|---|
| Priority 1 | Adverse impact to the environment or health and safety of personnel and public. Items and services which are essential to the safe operation of the facility or supporting systems.. Example - Certification of personnel that must be corrected, updated, or initiated to continue the safe operation of the facility or supporting systems.   |
| Priority 2 | Minimal adverse impact to the environment or health and safety of personnel and public. Items and services which are necessary for the continued operation of the facility or supporting systems but which have no foreseeable effect on the safety of personnel in the event of failure or malfunction. Example - Repair to an SSC that has no safety significance (nuclear or otherwise) in its defective state, but which must be repaired to continue operations. |
| Priority 3 | No adverse impact to the environment or health and safety of personnel and public. Items or services which are evaluated as having negligible effect on safety, or reliability, or cost of operation of the facility or supporting systems. Example - Administrative change to a procedure or for which compensatory actions or current program requirements adequately cover the process.  |

Step 1, the *Site Program Assessment*, Attachment 2, was assessed against these criteria. Because of its programmatic nature, all compliance activities were assessed as Priority 3. Steps 2 and 3 - the facility and activity program assessments and compliance assessments, respectively - are assessed against these criteria as well, and are used to determine the sequence and assignment of resources needed to complete the compliance activities noted in Attachment 3 (PL-3029, Revision 0). Priority 2 and 3 assignments are flexible and may be adjusted based on new or external factors outside the control of the site organizations, such as the promulgation of additional orders or a reduction in budgets/funds for the project. Any changes to the priority or completion date of compliance activities will be reflected in a revision of the matrix and will be processed as a change to this *QA Rule Implementation Plan*.

---

## 9.0 Compensatory Action

Appropriate compensatory actions required for incomplete implementation activities are indicated by double underlines and documented in Attachment 3 (PL-3029, Revision 0). (No compensatory actions were recommended for Step 1, *Site Program Assessment*, Attachment 2.) For the purposes of this document, compensatory actions are interim measures taken by FDF pending full compliance with the QA Rule or imminent non-applicability of its requirements. They will be temporary, or will be submitted for equivalency determination or exemption, as appropriate. Compensatory actions may be driven by economic or technological limitations.

In any event, compensatory actions WILL meet or exceed the understood intent of requirements. They are only used when the absence of implementation activities jeopardizes the health or safety of workers or the public, or if incomplete actions could result in an adverse impact to the environment. They are generally used to document actions to be taken during the development and processing of implementation activities and are most appropriate for Priority 1 items, as defined in Section 8.0, *Prioritization Process*. They will only remain as permanent actions if the life of the affected facility or activity is too short to complete the recommended implementation activity before that facility or activity has been appropriately downgraded below Hazard Category 3, or has ceased to exist. For example, a facility that is scheduled to be demolished may require the incorporation of permanent compensatory action if the completion of the implementation activities cannot be accomplished prior to the demolition, or are not economically feasible.

## 10.0 Tracking

The nonconformance database, maintained in the Quality Assurance Department, will be used to track compliance activities associated with all steps of the evaluation process (defined in Section 3.0) as documented in Attachments 2 & 3 (PL-3029, Revision 0). Compliance Activities identified by nonconformances will be entered into in the nonconformance tracking database and tracked until completion of all items in accordance with *QA-0001, FDF Nonconformance Identification and Tracking System*. This procedure is applicable to all FDF organizations and describes the methods and approvals to be used in determining the assignment, tracking, monitoring, status, reporting, closure, and file retention of FDF nonconformance reports. Both of these processes ensure that compliance activities are documented and tracked until completion and that appropriate resources are applied to their resolution based on the level of importance or risk of the activity.

## 11.0 Standards

As indicated in Section 1.0 and 2.0, the S/RID provides a specific list of Technical Standards to be used to meet the criteria of the requirements document (10 CFR Part 830.120).

In order to implement the QA Rule, FDF's QAP is based on the appropriate criteria specified in:

- The Rule itself; and
- The Implementation Guide (G-830.120, *Implementation Guide for Use With 10 CFR Part 830.120 Quality Assurance*, Rev. 0, dated April 15, 1994). Statements from this guide have been identified as either requirements or recommendations (*Move Toward Excellence*) as documented in both the QAP and Matrices 1 & 2 of this Implementation Plan.

The QAP uses 10 CFR Part 830.120 for the basic requirements and uses the other standards to enhance the QAP and tailor it to the site. Implementation of the QAP requires the use of procedures at the site, functional area, and organizational unit levels which satisfy the provisions of QAP. The QA Functional Area Manager (FAM) and organizational unit managers who develop procedures shall develop a matrix or table describing the site or organizational procedures used by the functional area or organization to satisfy the requirements of the QAP. The QA FAM has overall responsibility for the implementation of the QAP.

#### **12.0 Discussion of the QA Program, and Review, Approval and Maintenance of the Quality Assurance Rule Implementation Plan (QARIP)**

The QARIP shall be reviewed by FDF senior management and approved by the QA Program Coach. The *Quality Systems Section* within the *QA Department* shall maintain this implementation plan and shall incorporate its requirements into QA procedures. FDF will conduct its role in the DOE-FN and DOE-HQ review and approval in accordance with the site procedure for the preparation, review, approval and distribution of Implementation Plans, and with DOE-FN's site procedure dealing with DOE-HQ's review of documents.

FDF developed the QARIP and the QAP to meet the requirements of 10 CFR Part 830.120. QAP compliance with the QA Rule is described and documented in this document's Section 4.0, *Milestones and Schedules* and the referenced matrices.

The QAP references RM-0016, *Fluor Daniel Fernald Management Plan: FDF Policies and Requirements Manual*, which describes FDF's management system, including planning, scheduling, and cost-control considerations. FDF recognizes three categories of work, Management, Performance, and Assessment, as described below.

The *Application of Quality Levels to QA Program Criteria* chart, contained in Appendix D of the QAP, provides both prescriptive guidance and broad-based requirements for assignment of the appropriate resources necessary to implement a Quality Assurance program based on the risk, hazard, safety and cost significance of a particular facility, activity, system, structure, or component (as defined by HCs, safety systems, and Quality Levels.) This matrix is provided for reference purposes and should be used by functional-area, program, or project managers to develop their documented program and procedures in accordance with the safety significance of their work. It should also be used to develop subcontractor requirements, procurement specifications and design requirements for all products or services purchased by FDF. In addition, this matrix serves as a tool for assessors of these programs to ensure that appropriate resources have been applied to the QA management system developed for that work, whether the work is performed by FDF or a subcontractor.

Unless specifically identified as requirements in the QAP, the ten criterion summaries presented below render a "flavor" to the QAP Implementation, and are to be viewed as guidance only, not as requirements to be added to the QAP. They are considered to be "Area of Excellence" goals, which managers who are in compliance with hard requirements may strive for in the interest of continuous performance improvement.

## 12.1 Management

This category contains the program elements that define the framework for management systems supporting the QAP. It is composed of the following criteria:

### 12.1.1 Criterion 1 - Program

This criterion requires FDF to develop and maintain an effective management system with the goal of ensuring safe, reliable products and services that meet or exceed the customer's needs, requirements, and expectations. This system should focus on accomplishing the mission as outlined in FDF's strategic plan. It applies to every component and employee of FDF. It should be applied through the use of a graded approach that provides the flexibility to design controls that best suit FDF's mission and management challenges.

### 12.1.2 Criterion 2 - Personnel Training and Qualification

This criterion supports mission accomplishment by assuring that each person is capable of performing her or his assigned tasks. Training can be organized into three categories: project-specific, site-specific, and institutional. Project-specific training is that which applies specifically to the mission at hand, and includes mission goals, methods, requirements, process metrics, and skills. Site-specific training conveys the safety, security, and operations knowledge specific to a particular site or facility. Site and facility owners define appropriate site-specific training requirements.

They also coordinate with managers whose organizations use these sites or facilities, as well as the Training and Security Departments, to ensure that appropriate measures support a safe working environment. (Operations or support managers have primary responsibility for safe operations and support within that environment.) Feedback from personnel performance, former trainees, and supervisors will be used to determine effectiveness of training. The results of these evaluations should be used as the basis for improving the training program. Training plans can be valuable in supporting safe and effective work, as well as professional development.

#### 12.1.3 Criterion 3 - Quality Improvement

This criterion guides managers through the systems which facilitate the identification, reporting, correction and verification of nonconforming items or processes, and provides managers a framework for improving the processes under their control. Quality improvements hinge on open communications across all levels of the organization, to include taking a "no-fault" approach to the investigation and correction of deficiencies. Quality improvements also depend on senior management support, including emphasis in senior management communications of all types, and the level of investment in training and resources (including both money and time) necessary for FDF lower-tier managers and employees to implement serious quality improvement efforts. FDF Managers should encourage the development and exploration of new ideas to improve quality. All quality improvement efforts must correspond to their anticipated impact on the achievement of FDF mission goals (especially environmental, safety, and health-related goals).

#### 12.1.4 Criterion 4 - Documents and Records

Documents and records are essential to the effective management, performance, and assessment of FDF work. Documents may control policy or may convey administrative or technical information or requirements. Such documents must be reviewed, approved, issued and controlled to assure their reliability and authority are not compromised. Records define accomplished work (including requirements met), and generally contain information that is retained for its expected future value. Records and documents may be electronically stored, written, or printed, or on various other media. Regardless of the medium, each document or record must be handled, stored, or otherwise controlled so that its information can be retrieved in legible form and with its integrity intact.

**12.2      Performance**

This category provides for controlling activities associated with establishing and maintaining the technical requirements for our work. Included are design and procurement specifications and requirements for testing. It is composed of the following criteria:

**12.2.1      Criterion 5 - Work Processes**

Each work process is a planned mix of people, equipment, environmental conditions, supply, management support, resources, and requirements. The absence or inadequacy of any of these facets can potentially thwart the achievement of process goals. Conversely, only a proper mix of all of these facets can ensure effective and efficient achievement of those goals. All personnel, but especially the managers, must know and understand the work goals. Workers should be consulted as the experts they are regarding any change of or potential impact to their work processes. This includes policies, procedures, plans, and other information, in addition to work goals. Work process documents (procedures, instructions, etc.) should be based on the skills of the workers, and should provide a balance of control and flexibility which promotes effective and efficient accomplishment of the work goals.

**12.2.2      Criterion 6 - Design**

Definition, control, and verification of design is necessary to ensure that SSCs fulfill contractual requirements and customer expectations. Design inputs are to be controlled and correctly translated into design outputs which are technically correct and meet the customers' requirements. Design inputs can include design bases, health and safety considerations, expected life cycle, performance standards (including reliability requirements), and requirements from codes and standards. Design outputs usually include prints, drawings, and specifications. Design records may include design inputs and outputs, calculations and analyses, reports, design verification documentation, and design change documentation (including revisions). The design verification process may identify opportunities for improvement in accordance with Criterion 3.

**12.2.3      Criterion 7 - Procurement**

Management controls exist for procured supplies and services through compliance with the terms and conditions of prime contract DE-AC24-92OR21972 and directions issued by the DOE Contracting Officer pursuant to the prime contract. Implementation of 10 CFR Part 830.120 for Procurement is subject to the general applicability limitations of the *QA Rule Implementation Plan*.

**12.2.4      Criterion 8 - Inspection and Acceptance Testing**

Inspections and tests serve to verify that physical characteristics and functions of SSCs are acceptable to the organization that will use the SSCs. Appropriate sections of approved codes or standards may be used for acceptance requirements and inspection/test methods in lieu of specially-written test procedures. SSCs should be ready for service or use when the inspection/ testing process is finished.

**12.3      Assessment**

This category provides for periodic assessment of the QAP to determine its effectiveness and to promote quality improvement. It is composed of the following criteria:

**12.3.1      Criterion 9 - Management Assessment**

This criterion governs the process by which management determines the adequacy of human and material resources and management systems to achieve FDF goals and objectives. Managers should identify and resolve both systemic and cultural management issues and problems. The assessment should include an introspective evaluation to determine if the integrated management system effectively identifies strengths and weaknesses, and focuses on meeting strategic goals. Direct observation of work is arguably the most effective method of performing this assessment, although it should be supplemented with other methods for a comprehensive perspective. Continuous performance improvement is the chief end of this criterion.

**12.3.2      Criterion 10 - Independent Assessment**

This criterion addresses a key method by which FDF reviews its ongoing work and management processes to assure objective assessment of compliance with requirements and effectiveness of programs and processes. Assessments should address management processes which affect work performance such as planning; program support, and training, in addition to direct work processes. The independence derives from assessors having freedom from responsibility for the processes/work/organizations assessed. Assessors should view the assessed organizations as customers for feedback. Assessors should focus on improving quality and process effectiveness. Strengths and weaknesses affecting the quality of process outputs should be identified and reported so that meaningful action can be taken to improve quality.

The ten criteria established by the QAP and the application of appropriate resources based on the Quality Level of the facility or activity, will ensure that a fully functioning Quality Management System is in place to implement the requirements of 10 CFR Part 830.120.

**13.0 Attachments**

**Attachment 1 - QARI Compliance Evaluation Process**

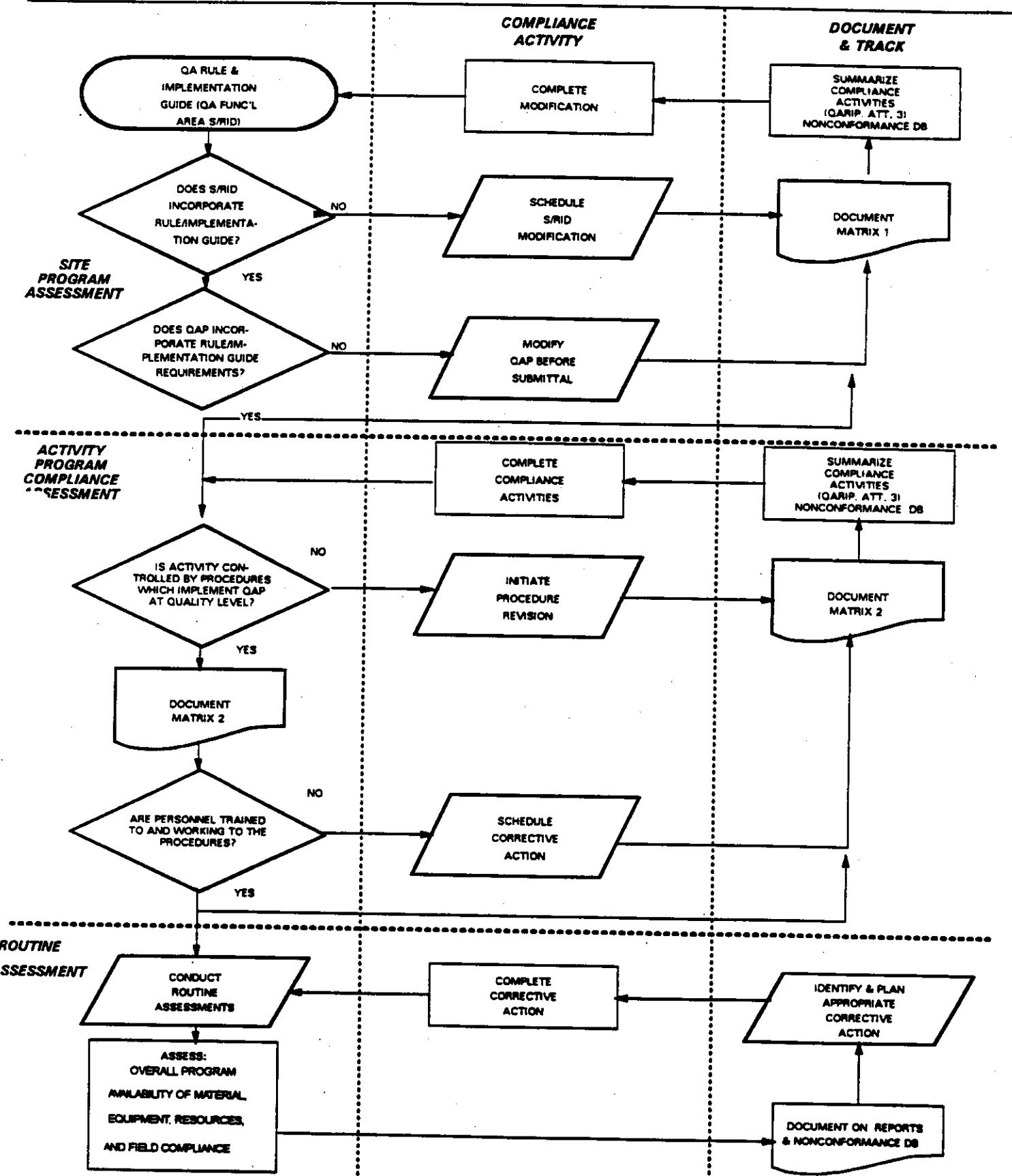
**Attachment 2 - Matrix 1 - Sitewide QA Program Compliance Assessment**

**Attachment 3 - Completed Corrective Actions**

**Attachment 4 - List of Hazard Category 2 & 3 Facilities**

## ATTACHMENT 1

## COMPLIANCE EVALUATION PROCESS



## QA RULE IMPLEMENTATION PLAN

## ATTACHMENT 2 (Matrix 1)

Page 1 of 26

PL-3029 Revision 1

Effective Date: 11-30-97

## SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT<sup>1</sup></u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILE-STONE</u>
<b>GENERAL RULE [10 § 830.120 (a)(1)(I) - (a)(1)(iii), (b)(1)-(b)(4)]</b>				
(a) (1) (I)	FERMCO shall conduct its work in accordance with the criteria of paragraph C of this section.	<u>Program Standard</u> , p. vi	Change references in S/RHD and RM-0012 from DOE 5700.6C to 10 CFR Part 830.120	03/01/95
(a) (1) (ii)	FERMCO shall develop and submit for approval by DOE a Quality Assurance Program (QAP) for the work.	¶ 1.2.1.	Submit QAP and QARIP to DOE for approval	10/30/94
(a) (1) (iii)	FERMCO shall implement the QAP, as approved and modified by DOE.	PL-3029 - all RM-0012 - all	Revise Implementation Plan	10/30/94
(b) (1)	FERMCO shall develop a QAP by applying the quality assurance criteria specified in paragraph C of this section.	<u>Program Standard</u> , p. vi	None	
(b) (1)	A QAP shall include a discussion of how the criteria of paragraph C of this section will be satisfied.	<u>Program Implementation</u> , p. viii, ix; PL-3029, Att. 2		
(b) (1)	The criteria of paragraph C of this section shall be applied using a graded approach.	1.4.1; Appendix D; PL-3029, § 1.0, 3.0, & 7.0	None	
(b) (1)	The contractor shall use appropriate standards, wherever applicable, to develop and implement its QAP.	<u>Program Standard</u> , p. vi	None	
(b) (2)	Within 180 days after May 5, 1994, a contractor shall submit to DOE for approval a current QAP and an implementation plan.	PL-3029 (all)	None	
(b) (3)	A contractor may, at any time, make changes to an approved QAP.	Permissive; not a requirement	None	

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

## SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT<sup>1</sup></u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILE-STONE</u>
(b) (3)	Changes made over the previous year shall be submitted annually to DOE for approval. A submittal shall identify the changes, the pages affected, the reason for the changes, and the basis for concluding that the revised QAP continues to satisfy the requirements of this section. Changes made to correct spelling, punctuation, or other editorial items do not require explanation.	Not applicable until 11/01/95	None	
(b) (4)	Implementation plans and QAPs shall be regarded as approved by DOE 90 days after submittal, unless approved or rejected by DOE at an earlier date, and shall include any modification made or directed by DOE. (90 days formerly for changes only).	Instructional; not an FEMP requirement	None	
<b>CRITERION 1 - PROGRAM</b>				
(c) (1) (1)	A written QAP shall be developed, implemented, and maintained.	RM-0012, Rev. 3 PL-3029, Rev. 0	None	
(c) (1) (1)	The QAP shall describe the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the work.	RM-0012, ¶ 1.2.2; RM-0016 - all	None	
(c) (1) (1)	QAP shall describe management processes, including planning, scheduling, and resource considerations.	RM-0016 - all (especially ¶ 1.1.8, 1.1.13, 1.2.4, 1.3, & 2.2.5)	None	
Implementation Guide, Criterion 1 (1A)	<i>[FERMCO shall] develop and maintain an effective management system with the goal of ensuring safe, reliable products and services that meet or exceed the customer's requirements, needs, and expectations.</i>	"Statement of FERMCO Quality Assurance Authority," page iv.		
1B	<i>The management system should include the methods for managing, performing, and assessing the adequacy of work, including work assigned to parties outside the organization.</i>	1.2.4.15	Develop S/RID #19 (Acquisition)	01/06/95

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

**QA RULE IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix 1)**  
Page 3 of 26

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
<i>IC</i>	<i>The management system should focus on accomplishing the mission as outlined in the organization's strategic plan.</i>	<i>1.2.9 RM-0016. ¶ 1.1.3, 1.1.5, &amp; 1.1.9 (Table I-1)</i>	<i>None</i>	
<i>ID</i>	<i>The management system applies to every component and employee of the organization, and includes the organizational structure, functional responsibilities, levels of authority, and interfaces.</i>	<i>Scope, p. vi, 1.2.2, 1st bullet</i>	<i>None</i>	
<i>IE</i>	<i>If a formal management system has been established, its attributes should be compared to the criteria of 10 CFR Part 830.120 to ensure that all requirements have been adequately addressed.</i>	<i>This table fulfills this requirement.</i>	<i>None</i>	
<i>IF</i>	<i>Management retains primary responsibility and is accountable for the scope and implementation of the management system.</i>	<i>1.3.1, 1st bullet 1.3.3, 1st bullet RM-0016.1.1.5.2, 4 &amp; 1.2.1</i>	<i>None</i>	
<i>IG</i>	<i>Every individual in the organization is responsible for achieving quality in his or her activities.</i>	<i>1.2.8</i>	<i>None</i>	
<i>IIH</i>	<i>Management should promote effective achievement of performance objectives through the:</i> <ul style="list-style-type: none"> <li>• establishment of task assignments;</li> <li>• the identification of lines of communication; and</li> <li>• determination and provision of the necessary resources and environment to accomplish the required activities.</li> </ul>	<i>1.3.3, 2nd bullet RM-0016. ¶ 1.3.1-3, 3.2</i>	<i>None</i>	
<i>IJ</i>	<i>Management should ensure that all personnel understand and implement the management system.</i>	<i>1.3.3, 9th bullet</i>	<i>Understand - QA Orientation Training Class 11/15/94</i>	
<i>IK</i>	<i>The scope and depth of the management system's application of requirements to a specific activity should be determined by the use of a grading process, which provides the flexibility to design controls that best suit the facility or activity.</i>	<i>Appendix D, p. I, ¶ 1.0, 2nd paragraph</i>	<i>Implement - QA Audits Ongoing</i>	
<i>IL</i>	<i>The graded approach should determine the appropriate level of effort necessary to attain and document the requirements established through the consideration of prescribed facility-specific or activity-specific factors, such as the:</i> <ul style="list-style-type: none"> <li>• Level of risk;</li> <li>• Age, status, and condition of a facility or process;</li> <li>• History of problems at a site or facility;</li> <li>• Adequacy of existing safety documentation; and</li> <li>• Complexity of products or services involved.</li> </ul>	<i>Appendix D, p. I, ¶ 1.0, 4th paragraph</i>	<i>None</i>	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

*Ten* refers to requirements from the Implementation Guide G-831 Rev. 0 (04/15/94)

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
IL	<i>This graded approach process should not be used to obtain relief from the requirements of 10 CFR Part 830, 120.</i>	<i>Appendix D, p. I, § 1.0, 5th paragraph</i>	<i>None</i>	
<b>CRITERION 2: PERSONNEL TRAINING AND QUALIFICATION</b>				
(c)	Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. A fundamental requirement for effective accomplishment of any mission is that all personnel be capable of performing their assigned tasks.	2.2.2 RM-0002 PL-3032	None	
(c)	Personnel shall be provided continuing training to ensure that job proficiency is maintained.	2.2.6 RM-0002 PL-3032	None	
Implementation Guide Criterion 2 (2A)	Qualification and training programs ensure that the required capabilities are achieved and maintained by personnel.	2.2.7.8	None	
	Management should commit resources to facilitate the training and qualification processes, provide qualification and training requirements for personnel in their organizations, and ensure that personnel hired or transferred into positions meet the appropriate requirements.	2.3.2	None	
2C	Each level of the organization should adequately describe their training and qualification processes. These descriptions should include requirements, interfaces, training methods, and training responsibilities and duties of line and training organizations.	RM-0016, 1.3.2.1.6 "Training and Qualification," (SRID 16.1 & 16.2)	None	
2D	<i>Polices and procedures that describe personnel selection requirements should be established for each position. DISAGREE: Prefer personnel selection requirements be established for each position. Policies and procedures may govern that process, but may be general, not specific to each position.</i>	2.2.2 2.3.2, 3rd bullet	None	
2E	<i>These should include the minimum applicable requirements for education, experience, and physical condition.</i>	2.2.2 2.3.2, 1st bullet	None	
2F	<i>Management should determine that personnel are suitably qualified to accomplish their assigned tasks.</i>	2.3.2, 5th bullet	None	

*Italic/Capital Letters & #pt Text refers to requirements from the Implementation Guide G-830.120-Rev. 0 (04/15/94).*

**QA RULE IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix 1)**

Page 5 of 26

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
2G	<i>Personnel may be qualified by:</i> <ul style="list-style-type: none"><li>• considering previous experience, education, and training;</li><li>• demonstrating and testing to verify previously acquired skills; or</li><li>• completing a training or qualification program.</li></ul>	2.3.2, 5th bullet	<i>None</i>	
2H	<i>This determination should be accomplished before personnel are allowed to perform the work for which they are being qualified.</i>	2.3.2, 4th bullet	<i>None</i>	
2I	<i>Training should provide knowledge of the correct processes and methods to accomplish assigned tasks.</i>	2.2.2.3	<i>None</i>	
2J	<i>Training should provide an understanding of the fundamentals of the work, the context within which the work is performed, and the reasons for any special work requirements.</i>	2.2.3	<i>None</i>	
2K	<i>Training goals, lesson plans, and other training materials should be consistently developed, reviewed by subject matter experts, approved by management, and used to effectively deliver training.</i>	2.2.8	<i>None</i>	
2L	<i>Training materials should be controlled to ensure that the latest approved versions are used.</i>	2.2.8, 4.2.4	<i>None</i>	
2M	<i>Training effectiveness should be constantly monitored. <u>DISAGREE</u>: prefer "periodically" to "constantly."</i>	2.2.8	<i>None</i>	
2N	<i>Worker performance should be evaluated to ensure that the training program conveys all required knowledge and skills.</i>	2.2.8	<i>None</i>	
2O	<i>Feedback from personnel performance, former trainees, and supervisors should be used to determine effectiveness of training. The results of these evaluations should be used as the basis for improving the training program.</i>	PL-3029, § 12.1.2	<i>None</i>	
2P	<i>Training usually falls within three categories: project-specific, site-specific, and institutional.</i>	PL-3029, § 12.1.2	<i>None</i>	
2Q	<i>Project-specific training should impart the knowledge required for the employee to best practice his/her knowledge or skills toward the successful completion of the mission. This training might include mission goals, methods, requirements, process metrics, and skills.</i>	PL-3029, § 12.1.2	<i>None</i>	
2R	<i>Project-specific training requirements should be defined by project management and workers.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

*i* Item refers to requirements from the Implementation Guide G-83

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
2S	<i>Site-specific training should convey the safety, security , and operations knowledge required to enter a specific site.</i>	<i>PL-3029, § 12.1.2</i>	<i>None</i>	
2T	<i>The site owner is responsible for defining [site] training requirements and ensuring that the training is administered. <u>DISAGREE: Project/operational management is responsible for ensuring that training is administered.</u></i>	<i>PL-3029, § 12.1.2</i>	<i>None</i>	
2U	<i>Institutional training should convey general information about the organization's mission, vision, goals, and management system. It may include general knowledge or skills training.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
2V	<i>Training plans should be prepared for all personnel.</i>		<i>2.2.2, 2.3.2, 3rd bullet</i>	<i>None</i>
2W	<i>The content of initial training plans should prepare personnel to perform the job.</i>		<i>2.2.2.4</i>	<i>None</i>
2X	<i>The content of continuing training plans should maintain and promote progressive improvement in incumbent job performance.</i>		<i>2.2.6</i>	<i>None</i>
2Y	<i>Training plans may also provide employee satisfaction and interest for further self enhancement.</i>		<i>2.2.6</i>	<i>None</i>
2Z	<i>Training plans can be valuable in motivating personnel to develop enhanced technical, managerial, or other skills and capabilities, and in tracking and documenting such development.</i>		<i>PL-3029, § 12.1.2</i>	<i>None</i>
2AA	<i>In the consideration of a training plan, the manager and worker should consider all types of available training.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
2BB	<i>Current facility, site, or organization procedures; technical and professional references; and past organization/industry experience should also be used to identify training plan content.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
2CC	<i>Instructors may be training providers or qualified members of the organization requiring training.</i>		<i>2.2.5</i>	<i>None</i>
2DD	<i>Instructors should possess technical knowledge, experience, and development and instructional skills.</i>		<i>2.2.5</i>	<i>None</i>
2EE	<i>Instructor training should be based, in part, on the results of instructor evaluations and training on new methods and equipment.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
<b>CRITERION 3: QUALITY IMPROVEMENT</b>				

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 1/30/94.

**QA RULE IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix 1)**  
Page 7 of 26

**SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT**

<b>ITEM NO.</b>	<b>TITLE OR SUBJECT</b>	<b>COMPLIANCE DOCUMENT<sup>1</sup></b>	<b>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</b>	<b>MILESTONE</b>
(c) (1) (iii)	Processes to detect and prevent quality problems shall be established and implemented.	3.2.1 SSOP-0023 ED-0001	None	
(c) (1) (iii)	Items, services, and processes that do not meet established requirements shall be identified, controlled, and corrected according to the importance of the problem and the work affected.	3.2.3 SSOP-0023 ED-0001 SSOP-0068	None	
(c) (1) (iii)	Correction shall include identifying the causes of problems and working to prevent recurrence.	3.2.4 SSOP-0023 ED-0001 SSOP-1075 QP-10.01	None	
(c) (1) (iii)	Item characteristics, process implementation, and other quality related information shall be reviewed and the data analyzed to identify items, services, and processes needing improvement.	3.2.5 SSOP-0023 ED-0001 QP-10.01	None	
<i>Implementation Guide Criterion 3 (3A)</i>	<i>Quality improvement is based on the premise that all work activities can be planned, performed, measured, and improved.</i>	<i>Not explicitly stated; however, underlying theme undergirds entire QAP.</i>	<i>Name</i>	
<i>3B</i>	<i>Management is responsible for building a culture in which improvement is continuous and an integral part of the organization.</i>	<i>3.3.3</i>	<i>Name</i>	
<i>3C</i>	<i>In promoting that culture, management should encourage the development and exploration of new ideas.</i>	<i>PL-3029, § 12.1.3</i>	<i>Name</i>	
<i>3D</i>	<i>The continuous improvement effort should increase worker awareness of the importance of quality and emphasize enhanced product and process safety and reliability.</i>	<i>3.2.5 3.3.3, 1st bullet</i>	<i>Name</i>	

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
3E	<i>It should also promote a work environment in which all personnel will readily identify nonconforming items and potential areas for improvement.</i>	3.2.1.6 3.3.1, 4th-6th bullets 3.3.3, 2nd-4th, 7th bullets 3.3.5	<b>None</b>	
3F	<i>Management policy for continuous improvement should encourage the development and exploration of new ideas for improvement.</i>	PL-3029, § 12.1.3	<b>None</b>	
3G	<i>Management policy for continuous improvement should be documented and communicated to all levels of the organization. The policy should make clear that the responsibility for improvement rests with each individual and organizational element and cannot be delegated to a particular person or group within the organization.</i>	RM-0016, Appendix A, Presidential Policy # PO- QA-01 "Quality Assurance," dated 12/15/93.	<b>None</b>	
3H	<i>The continuous improvement approach focuses on problem prevention, corrective action, and performance improvement, rather than relying on post-process inspection to prevent defective items from reaching customers. Process performance should be continuously measured and evaluated to identify improvement opportunities. DISAGREE: PREFER "PERIODICALLY" TO "CONTINUOUSLY." ESPECIALLY SINCE MOST FERMCO PROCESSES ARE DISCRETE, NOT CONTINUOUS; PROCESSES.</i>	3.3.3, 6th & 7th bullets	<b>None</b>	
3I	<i>Each manager is responsible for managing process quality within his/her organization.</i>	PL-3029, § 12.1.3	<b>None</b>	
3J	<i>Each worker should know how his/her process contributes to the strategic goals of the organization.</i>	3.3.6	<b>None</b>	
3K	<i>Process performance should be continuously evaluated to identify actions that can be taken to improve output quality. These evaluations may be based on quantitative and/or qualitative information obtained from monitoring process performance indicators and from management and independent assessments. SEE DISAGREEMENT, ITEM 3H.</i>	3.2.2.5 3.3.3, 7th bullet	<b>None</b>	
3L	<i>The areas of performance that most directly affect the process's ability to meet customer requirements and expectations should receive the greatest emphasis in process improvement.</i>	Appendix D	<b>None</b>	
3M	<i>Any failures to meet customer requirements or expectations should be identified, corrected, and prevented from recurrence.</i>	3.2.3.4	<b>None</b>	

*Italic/Capital Letters & # Text refers to requirements from the Implementation Guide G-830.120-Rev. 0 (04/15/94).*

*I Unless otherwise noted, all references in this column refer to RM-0012, Quality Assurance Program, Rev. 3, effective 11/30/94.*

**QA RULE IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix 1)**

Page 9 of 26

**SITE-WIDE QA PROGRAM COMPLIANCE ASSESSMENT**

PI-3029 Revision 1  
 Effective Date: 11-30-97

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
3N	<i>One approach to process improvement is the Plan-Do-Check-Act (PDCA) cycle. It is a formalized technique for referring to the continuous process of studying a work process and finding new ways to improve performance. The PDCA cycle is an ongoing pursuit of the planning, implementing, and evaluating of process improvements.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
3O	<i>Workers should be empowered through training to operate processes, identify process deficiencies, develop improvement approaches, implement solutions, and evaluate process improvements.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
3P	<i>Open communications across all levels of the organization are essential for continuous improvements.</i>	<i>PL-3029, § 12.1.3</i>	<i>None</i>	
3Q	<i>The "Plan" phase should define what the process is required to accomplish. The process should be designed to be results-oriented and based on desired output. The planning phase should consider such factors as customer identification, desired output, process steps, process capability, performance indicators, resources, and process baseline.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
3R	<i>During the "Do" or performance phase, work is accomplished to produce goods or services for the customer. Process improvements are implemented.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
3S	<i>The "Check" phase should measure the process operation. Process performance indicators should be monitored and results examined for indications of required adjustments. The process should be operating to a performance baseline and the workers should be alert for problems or improvement opportunities.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
3T	<i>The "Act" phase should determine how the process is working and if further process refinements are required. The qualitative and quantitative data gathered is analyzed and results compared to the desired process results, and to results from similar processes. Trends in productivity and quality can be identified. If the need for further process modifications are indicated, concepts should be generated to feed to the planning phase for further consideration.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
<b>CRITERION 4: DOCUMENTS AND RECORDS</b>				
(c) (1) (iv)	Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design.	4.2.1.6 4.3.2.5 SSOP-0103 SSOP-0609	None	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

*\* Text refers to requirements from the Implementation Guide G-83*      Rev. 0 (04/15/94)

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
(c) (1) (iv)	Records shall be specified, prepared, reviewed, approved, and maintained.	4.2.6 SSOP-0103 SSOP-0609 SSOP-0096	None	
<i>Implementation Guide Criterion 4 (4A)</i>	<i>Documents and records are required to manage, perform, and assess work.</i>	<i>PL-3029, § 12.1.4</i>	<i>None</i>	
<i>4B</i>	<i>Management should identify any documents which must be controlled and records which must be generated, and should commit the resources necessary to accomplish the document and record requirements.</i>	<i>4.3.1, 1st, 2nd, 4th, and 7th bulletts</i>	<i>None</i>	
<i>4C</i>	<i>Documents may be required by organizations, projects, or programs to control policy, administrative, or technical information.</i>	<i>PL-3029, § 12.1.4</i>	<i>None</i>	
<i>4D</i>	<i>A document may describe work to be done, date to be used at different locations or by different people, or, in changing situations, data that is controlled from time to time for reference purposes.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
<i>4E</i>	<i>A document control process should establish requirements to release documents for distribution, identify recipients, specify actions to be taken with existing documents when revisions are released for distribution or documents are canceled, and identify unique revisions and copies.</i>	<i>4.2.1.3.4</i>		<i>None</i>
<i>4F</i>	<i>Document control requirements should be defined by each organizational unit.</i>	<i>4.3.3, 1st bullet</i>		<i>None</i>
<i>4G</i>	<i>Although the actual process may be supplied internally or externally, the organizational unit is responsible for ensuring that its requirements are being met.</i>	<i>4.3.3, 1st bullet</i>		<i>None</i>
<i>4H</i>	<i>A record contains information that is retained for its expected future value.</i>	<i>PL-3029, § 12.1.4</i>		<i>None</i>
<i>4I</i>	<i>Records should be sufficient to support technical and regulatory decisions</i>	<i>4.2.6.9 FD-1000, § 2.3, 3.3, 4, 8, et.al.</i>		<i>None</i>
<i>4J</i>	<i>Records and documents may be electronically stored, written or printed, microfilm, photographs, radiographs, or laser disks.</i>	<i>PL-3029, § 12.1.4</i>		<i>None</i>

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
4K	Records are compiled into a records management system that ensures appropriate records are maintained.	4.1, 4.2.6	None	
4L	The records system should include provisions for retention, protection, preservation, changing, traceability, accountability, and retrievability of records.	4.2.6.7	None	
4M	While in storage, records should be protected from damage, loss, and deterioration.	4.2.6, 4.3.1	None	
4N	Evidentiary records should have appropriate procedures controlling media type, chain of custody, and confidentiality.	4.2.6	None	
4O	For records that require electronic processing and control, the hardware and software required to maintain and access the records should be maintained and controlled to ensure that the records remain usable. These records include information recorded on magnetic media and optical disks.	4.2.8	None	
4P	The National Archives and Records Administration (NARA) has final authority for approving the disposition of Government records. NARA publishes the General Records Schedule, and approves DOE unique records schedules.	4.2.11	None	
4Q	All records management systems should have schedules for records retention and disposition in accordance with the requirements of NARA and DOE 1.324.2 (latest issue), Records Disposition.	4.2.6.11; RM-0016, 1.3.2.8 "Management Systems" (SRID 1.8.3.5)	None	
4R	Records management systems should address the requirements of DOE 1.324.5 (latest issue). Records Management Program.	RM-0016, 1.3.2.8 "Management Systems" (SRID 1.8.3.7)	None	
4S	Applicable standards may differ in records management terminology from the NARA requirements.	Not selected as a specific requirement	None	
4T	Care should be taken to ensure that the requirements of NARA, applicable standards, and any additional statutory requirements are met.	RM-0016, 1.3.2.8 "Management Systems" (SRID 1.8.3.2-7)	None	
4U	Records retention times may also be included in contractual requirements.	Not selected as a specific requirement	None	
<b>CRITERION 5: WORK PROCESSES</b>				

Unless otherwise noted, all references in this column refer to RM-0012, Quality Assurance Program, Rev. 3, effective 11/30/94.

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT<sup>1</sup></u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
(c) (2) (1)	Work shall be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means.	5.2.2 5.6.2, 3rd & 4th bullets 5.6.4 SSOP-0061 SSOP-0716	None	
(c) (2) (1)	Items shall be identified and controlled to ensure their proper use.	5.3.1.1.2 5.6.2, 7th bullet 5.7.1 SSOP-0061	None	
(c) (2) (1)	Items shall be maintained to prevent their damage, loss, or deterioration.	5.3.2 5.4.1 5.8.1 SSOP-0061	None	
(c) (2) (1)	Equipment used for process monitoring or data collection shall be calibrated and maintained.	5.5.1 5.9.1 FMPC-0716	None	
<i>Implementation Guide Criterion 5 (SA)</i>	<i>A work process includes all activities involved in performing defined tasks to achieve an objective.</i>	5.1	<i>None</i>	
<i>SB</i>	<i>Work processes may include such activities as planning, scheduling, accounting, project management, design, analysis, fabrication, procurement, construction, installation, testing, operation, modification, maintenance, and decommissioning.</i>	<i>5.1</i>	<i>None</i>	
<i>SC</i>	<i>The work process is a planned one of people, equipment, environmental conditions, supply, management support, resources, and requirements. Any one of these elements has the potential for not allowing process goals to be met.</i>	<i>PL-3429, § 12.2.1</i>	<i>None</i>	

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
SD	Managers should routinely be involved in work processes to ensure that criteria for acceptable work performance are clearly defined.	5.2.4, 5.6.2 - 3rd, 4th, & 9th bullets	None	
SE	The manager is responsible for setting requirements and policies which control the conditions under which the work process is required to function.	5.6.2, 5th bullet	None	
SF	These conditions should be considered as an element affecting product and service output and quality.	Not selected as a specific requirement	None	
SG	The manager is responsible for planning and designing the work process.	5.6.2, 1-3rd bullets	None	
SH	The required goals should be known in order to plan for the work processes.	PL-3029, § 12.2.1	None	
SI	Work should be performed to prescribed standards, procedures, or instructions of a detail commensurate with the complexity and importance of the work.	5.2.2	None	
SJ	When possible, administrative controls should be simplified to minimize the impact of controls on the worker.	Not selected as a specific requirement	None	
SK	Personnel performing a process should be included in process improvement activities.	5.6.3	None	
SL	The work process should be designed to produce the desired quantity and quality of output.	5.2.2, 5.6.2, 9th bullet	None	
SM	The manager is responsible for placing qualified personnel in positions to accomplish work and training them in the requirements of the job.	5.6.2, 9th bullet	None	
SN	Workers should be trained to new conditions if the work process is changed.	5.6.2, 10th bullet	None	
SO	Workers are responsible for the quality of their own work.	1.2.8, 5.2.3	None	
SP	Workers should set goals for doing the work correctly the first time and contribute to improved work processes.	5.6.3.5	None	
SQ	Workers should be considered as prime resources concerning the various aspects of their processes. They understand how the process works and how metrics can best be applied. They are first line contact with both customers and suppliers and possess first hand knowledge of the products and services being supplied to and by their processes.	PL-3029, § 12.2.1	None	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

\*Text refers to requirements from the *Implementation Guide G-83* \*ev. 0 (04/15/94)

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
5R	<i>The manager should clearly identify authorities, responsibilities, and interfaces, both internal and external, regarding the work process in appropriate work process documents.</i>	5.6.2, 2nd bullet	None	
5S	<i>Polices, procedures, goals, plans, and any other information affecting a process should be clearly communicated to the personnel working within that process.</i>	PL-3029, § 12.2.1	None	
5T	<i>Applicable work process documents should be readily accessible to the worker.</i>	5.6.2, 9th bullet	None	
5U	<i>Work process documents should be based on the skills of the workers using them and on the complexity and importance of the work.</i>	PL-3029, § 12.2.1	None	
5V	<i>Work process documents should include any requirements for special processes which are highly dependent on the control of the process or the skill of the operator, and for which the quality of the product cannot be readily determined by inspection or test.</i>	5.2.2	None	
5W	<i>Work process documents should address such process elements as methods to prevent the use of incorrect or defective items and to ensure items requiring traceability are identified and controlled.</i>	5.3.2	None	
5X	<i>Documents should describe methods controlling packaging, shipping, receiving, storage, handling, cleaning, and preservation of items to prevent damage, loss, or deterioration.</i>	5.4.1	None	
<b>CRITERION 6: DESIGN</b>				
(c)	<i>Items and processes shall be designed using sound engineering/scientific principles and appropriate standards.</i>	6.2.1 6.3.1 RM-FMPC-0001 PL-3035	None	
(c)	<i>Design work, including changes, shall incorporate applicable requirements and design bases.</i>	6.2.2 6.3.1 RM-FMPC-0001 PL-3035 SSOP-S010	None	
(c)	<i>Design interfaces shall be identified and controlled.</i>	6.2.1.4 6.3.1 RM-FMPC-0001 PL-3035	None	

*Italic/Capital Letters & #174; Text refers to requirements from the Implementation Guide G-830.120-Rev. 0 (04/15/94).*

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
(c) (2) (ii)	The adequacy of design products shall be verified or validated by individuals or groups other than those who performed the work.	6.2.8 RM-FMPC-0001 PL-3035	None	
(c) (2) (ii)	Verification and validation work shall be completed and documented before approval and implementation of the design.	6.2.11 RM-FMPC-0001 PL-3035	None	
Implementation Guide Criterion 6 (6A)	Definition, control, and verification of design is necessary to ensure that systems, structures, and components (SSCs) fulfill contractual requirements and customer expectations.	PL-3029, § 12.2.2	None	
6B	Design work should be based on sound engineering and scientific principles.	6.1 6.2.1	None	
6C	A formal design process should be established which provides control of design inputs, outputs, verification, configuration and design changes, documentation, records, and technical and administrative interfaces.	6.2.1.3	None	
6D	SSCs important to safety should be subject to more stringent operational criteria and verification requirements than those not important to safety.	6.2.2 6.2.8	None	
6E	DOE 6430.1 (latest issue). General Design Criteria, provides a definition of safety class and examples of SSCs that are normally designated as safety class in DOE facilities.	Not selected as a specific requirement	None	
6F	Safety Analysis Reports should exist for each DOE nuclear facility which define that facility's SSCs important to safety.	PL-3029, § 1.2.3.2	None	
6G	Designs should provide for appropriate inspection, testing, and maintenance to ensure continuing reliability and safety of the SSC.	6.3.1. 1st bullet	None	
6H	The design should consider the expected use and life expectancy of the SSC in order to address appropriate disassembly and disposal requirements.	6.3.1. 1st bullet	None	
6I	Design records may include design input, calculations and analyses, engineering reports, design output documentation, design verification documentation, design change documentation, and design revisions.	PL-3029, § 12.2.2	None	

1 Unless otherwise noted, all references in this column refer to RM-0012, Quality Assurance Program, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
6J	<i>Design inputs should be technically correct and complete.</i>	6.2.6	<i>None</i>	
6K	<i>These inputs may include such information as design bases, health and safety considerations, expected life cycle, performance parameters, codes and standards requirements, and reliability requirements.</i>	PL-3029, § 12.2.2	<i>None</i>	
6L	<i>Technical design interfaces should be identified in the input documents and methods should be established for their control.</i>	6.2.1.4	<i>None</i>	
6M	<i>Administrative interfaces which include authorities, responsibilities, and lines of communication between the project team members should be defined in sufficient detail to identify and establish relationships of such team members as end-user, stakeholders, responsible design agency, designers, purchasing agents, suppliers, and testers/inspectors.</i>	<i>Not selected as a specific requirement</i>	<i>None</i>	
6N	<i>The design process should translate design input into design output documents that are technically correct and meet the end-user's requirements.</i>	6.2.2 PL-3029, § 12.2.2	<i>None</i>	
6O	<i>Aspects critical to the safety or reliability of the designed SSC should be identified during the design phase.</i>	6.2.2	<i>None</i>	
6P	<i>Design output documents should be useable by other project processes such as: manufacturing, assembly, construction, testing, inspection, maintenance, and decommissioning.</i>	6.2.2	<i>None</i>	
6Q	<i>Computer software used to originate or verify design solutions during the design process should be validated or the status of code validation should be identified and documented prior to use.</i>	6.2.6	<i>None</i>	
6R	<i>The agency accomplishing the design should verify that design output documents meet design input requirements and that any deviations have been approved and documented.</i>	6.2.2.3 6.3.1, 5th bullet	<i>None</i>	
6S	<i>The completed design should be recorded in design output documents such as drawings, specifications, test/inspection plans, maintenance requirements, and reports.</i>	6.2.2	<i>None</i>	
6T	<i>As-built drawings and shop drawings should be maintained after production or construction to show actual configuration.</i>	6.2.13	<i>None</i>	
6U	<i>The administrative interface process should clearly indicate responsibilities for design output document activities including as-built mark-up and updating during project construction/production phases, media use and transmission, document control, and records management.</i>	6.2.1	<i>None</i>	

1 Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

*Italic/Capital Letters & pt Text refers to requirements from the Implementation Guide G-830.120-Rev. 0 (04/15/94)*

**QA RULES IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix 1)**

Page 17 of 26

**SITEWIDE: QA PROGRAM COMPLIANCE ASSESSMENT**

PL-3029 Revision 1  
 Effective Date: 11-30-97

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
6V	<i>Design verification is a formal documented process to establish that the resulting SSC will be fit for the intended use.</i>	6.2.6	None	
6W	<i>Design verification methods include, but are not limited to, technical review, peer reviews, alternate calculations, and qualification testing.</i>	6.2.9	None	
6X	<i>When appropriate, the verification process may take previous validations of similar designs or on similar features of other designs into account.</i>	6.2.9	None	
6Y	<i>The design verification process may be used to identify opportunities for improvements in the efficiency, productivity, safety, reliability, or cost of the designed SSC.</i>	PL-3029, § 12.2.2	None	
6Z	<i>Design verification should be performed by technically knowledgeable persons separate from those who performed the design.</i>	6.2.8	None	
6A.4	<i>Interim verifications may be made at predetermined stages of design development.</i>	<i>Not selected as a specific requirement</i>	None	
6B.8	<i>The extent and number of design verifications should be based on a graded approach and should depend on the design product's complexity and importance to project success.</i>	6.2.8	None	
6C.C	<i>Design verification should be complete before design output is used by other organizations or to support other work such as procurement, manufacture, construction, or experimentation.</i>	6.2.11	None	
6D.D	<i>When this timing cannot be achieved, the unverified portion of the design should be identified and controlled.</i>	6.2.11	None	
6E.E	<i>In all cases, design verifications should be completed before relying on the SSC to perform its function and before installation becomes irreversible.</i>	6.2.11	None	
6F.F	<i>Design changes, including field changes and nonconforming items dispositioned "as-is" or "repair," should be controlled by measures commensurate with those applied to the original design.</i>	6.2.3	None	
6G.G	<i>Temporary modifications should receive the same levels of control as the designs of permanent modifications.</i>	6.2.3	None	
<b>CRITERION 7: PROCUREMENT</b>				

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

*Note:* Refers to requirements from the Implementation Guide G-83f rev. 0 (04/15/94)

*Note:* CG T

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT<sup>1</sup></u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
(c) (2) (iii)	Procured items and services shall meet established requirements and perform as specified. <sup>2</sup>	7.2.1 7.3.2 FMIPC-0302 FMIPC-0306	None	
(c) (2) (iii)	Prospective suppliers shall be evaluated and selected on the basis of specified criteria.	7.3.4 FMIPC-0302 FMIPC-0306 QP-7.05	None	
(c) (2) (iii)	Processes to ensure that approved suppliers continue to provide acceptable items and services shall be established and implemented.	7.2.5 FMIPC-0302 SSOP-0045	None	
<i>Implementation Guide Criterion 7 (7A)</i>	<i>The procurement process should ensure that items and/or services provided by suppliers meet the requirements and expectations of the end-user.</i>	<i>7.2.3.6.9</i>	<i>None</i>	
<i>7B</i>	<i>The procurement process should be planned and controlled to ensure that:</i> <ul style="list-style-type: none"> <li>• the end-user's requirements are accurately, completely, and clearly communicated to the supplier;</li> <li>• the suppliers', designers', and end-users' requirements are met during the production phase; and</li> <li>• the proper product is delivered on time and maintained until use.</li> </ul>	<i>7.2.2,3,8,10</i>	<i>None</i>	
<i>7C</i>	<i>The stringency of procurement requirements should be commensurate with the importance of the purchased items or services to the project.</i>	<i>7.2.11</i>	<i>None</i>	
<i>7D</i>	<i>Management controls exist for procured supplies and services through compliance with the terms and conditions of prime contract DE-AC24-92OR21972 and directions issued by the DOE Contracting Officer pursuant to the prime contract.</i>	<i>RM-WU16, ¶ 3.2.19 "Acquisition" (not yet developed)</i>	<i>Develop Acquisitions S/RID</i>	<i>01/16/95</i>

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-WU12, *Quality Assurance Program Description*, Rev. 3, effective 11/30/94.

<sup>2</sup> Items which can adversely impact the safety or health of employees, or can contribute to an off-normal release, should maintain a traceability, so that supplier recalls can be effected.

**QA RULE IMPLEMENTATION PLAN**  
**ATTACHMENT 2 (Matrix I)**

Page 19 of 26

**SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT**

PI-3029 Revision I  
Effective Date: 11-30-97

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
7E	<i>Criterion 7 of 10 CFR Part 830.120 should not be interpreted to require the development of redundant procurement management systems, but rather to ensure that existing procurement management systems adequately respond to end-user requirements.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
7F	<i>Procurement documents should clearly state test/inspection requirements and acceptance criteria for purchased items and services.</i>	7.2.2		None
7G	<i>Procurement documents should include any specifications, standards, and other documents referred to by the design documents.</i>	7.2.2		None
7H	<i>Critical parameters and requirements such as submittals, product-related documentation, nonconformance requirements, administrative documentation, personnel or materials qualifications, tests, inspections, and reviews should be specified as line items.</i>	7.2.2		None
7I	<i>Required qualified suppliers should be identified early in the design and procurement process.</i>		<i>Not selected as a specific requirement</i>	<i>None</i>
7J	<i>The prospective suppliers should be evaluated to verify their capability to meet performance and schedule requirements.</i>	7.2.4-6		None
7K	<i>The qualified suppliers should be evaluated periodically to confirm their continuing capabilities.</i>	7.2.6		None
7L	<i>Measures for evaluating and selecting suppliers may include:</i>	7.2.4 § 12.2.3, QARIP		None
	<i>• A review of the supplier's history for providing identical or similar items or services;</i>			
	<i>• An assessment of the supplier's capability based on evaluation of its facilities, personnel, and programs; or</i>			
	<i>• an evaluation of documented qualitative and quantitative information provided by the supplier.</i>			
7M	<i>Required supplier monitoring should be performed during the procurement process to ensure that acceptable items or services and schedule requirements are being met. Monitoring may include:</i>	7.2.6 § 12.2.3, QARIP		None
	<i>• surveillance of work activities;</i>			
	<i>• inspection of facilities and processes;</i>			
	<i>• review of plans and progress reports;</i>			
	<i>• processing of change information; and</i>			
	<i>• review and disposition of nonconformances.</i>			
7N	<i>Some programs or projects may be required to establish a formalized process to document occurrences when purchased items or services do not meet specifications.</i>	7.2.1.4, 10.13		None

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

"Test refers to requirements from the Implementation Guide G-83" rev. 0 (04/15/94)

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
70	<i>This process should specify the roles and responsibilities of program/project participants to ensure that results of actions taken meet program/project requirements.</i>	7.2.10	<i>None</i>	
7P	<i>The procurement system should include provisions for inspections.</i>	7.2.7,9	<i>None</i>	
7Q	<i>Requirements for inspections should be obtained from design documents.</i>	7.2.9	<i>None</i>	
7R	<i>Inspections should be adequate to ensure conformance with purchase requirements including verifying that specified documentation has been provided by the supplier.</i>	7.2.9	<i>None</i>	
7S	<i>The inspection should verify that items were not damaged during shipment.</i>	7.2.9	<i>None</i>	
7T	<i>Inspection may include the following methods:</i> <ul style="list-style-type: none"> <li>• inspections of materials or equipment at the supplier's plant;</li> <li>• receipt inspection of the shipped items;</li> <li>• review of objective evidence such as certifications and reports; and</li> <li>• verification of testing of items prior to or following shipment.</li> </ul>	7.2.9	<i>None</i>	
7U	<i>The procurement system should include provisions for conducting testing activities that may be required during the procurement process.</i>	7.2.8	<i>None</i>	
7V	<i>Supplier-generated documents should be accepted through the procurement system and controlled and processed by the end-user organization according to the provision of Criterion 4 (Documents and Records). These documents may include certificates of conformance, drawings, analyses, test reports, maintenance data, nonconformances, corrective actions, approved changes, waivers, and deviations.</i>	7.2.15	<i>None</i>	
<b>CRITERION 8: INSPECTION AND ACCEPTANCE TESTING</b>				
(b) (2) (iv)	Inspection and testing of specified items, services, and processes shall be conducted using established acceptance and performance criteria.	8.2.7 8.3.5 SSOP-0068 SSOP-1020	None	
(b) (2) (iv)	Equipment used for inspections and tests shall be calibrated and maintained.	8.5.1 8.6.1, 2nd bullet SSOP-0068 SSOP-0023	None	

*Italic /CG Times 8 pt Text refers to requirements from the Implementation Guide G-830.120-Rev. 0 (04/15/94).*

*Unless otherwise noted, all references in this column refer to RM-0012, Quality Assurance Program, Rev. 3, effective 11/30/94.*

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
<b>Criterion 8 (B1)</b>	<i>Inspections/test are accomplished to verify that physical characteristics and functions of structures, systems, and components (SSCs) are acceptable to the organization that will use the SSCs.</i>	<i>PL-3029, § 12.2.4</i>	<i>None</i>	<i></i>
<b>8B</b>	<b>SSCs requiring inspection/test should be identified early in the design phase.</b>	<b>6.2.2, 6.3.1, 1st bullet, 8.2.4</b>	<b>None</b>	
<b>8C</b>	<b>Inspections and tests should be conducted according to a graded approach.</b>	<b>8.1, 8.2.3</b>	<b>None</b>	
<b>8D</b>	<b>Acceptance parameters and other requirements such as inspection/test equipment or qualified inspection/test personnel should be specified in design documentation.</b>	<b>6.2.2, 6.3.1, 8.2.4</b>	<b>None</b>	
<b>8E</b>	<b>SSCs should be ready for service at the conclusion of the inspection or test process.</b>	<b>PL-3029, § 12.2.4</b>	<b>None</b>	
<b>8F</b>	<b>The types of SSCs and the length of time they are to remain in storage should be considered when generating the inspection or test plan.</b>	<b>5.2.5 8.2.4</b>	<b>None</b>	
<b>8G</b>	<b>The inspection/test process should identify the status of SSCs requiring examination to ensure that failed or untested SSCs are not used.</b>	<b>8.2.1 8.3.4</b>	<b>None</b>	
<b>8H</b>	<b>A method should be developed which controls reinspection and retesting for previously-failed SSCs.</b>	<b>8.2.6 8.3.6</b>	<b>None</b>	
<b>8I</b>	<b>The method should provide for review and documentation of changed inspection/test parameters.</b>	<b>3.2.7 8.2.6 8.3.4</b>	<b>None</b>	
<b>8J</b>	<b>Inspections/test should be performed by technically-qualified personnel that have the freedom of access and communication to report inspection/test results.</b>	<b>2.2.2 8.2.7, 2nd bullet</b>	<b>None</b>	
<b>8K</b>	<b>Final acceptance of SSCs should be verified and documented by organization having the final responsibility for the SSC.</b>	<b>8.2.2</b>	<b>None</b>	
<b>8L</b>	<b>All personnel should check items supplied to their work process to ascertain that the items are correct and suitable for use.</b>	<b>8.6.2</b>	<b>None</b>	
<b>8M</b>	<b>All personnel should check their process output to verify that it meets or exceeds requirements.</b>	<b>1.2.8</b>	<b>None</b>	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT<sup>1</sup></u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
8N	<i>Inspection/test methods should be established that define the requirements for activities that verify conformance of SSCs with specified requirements.</i>	8.6.1, 1st bullet	None	
8O	<i>Results of these activities should be documented and retained as project records.</i>	8.1, 8.2.6.7	None	
8P	<i>Inspection/test activities should be performed by persons other than those who performed or directly supervised the work being examined.</i>	8.2.2 8.3.2	None	
8Q	<i>Inspections/tests should be performed to written directives.</i>	8.2.4 8.3.5	None	
8R	<i>Appropriate sections of approved codes or standards may be used for acceptance requirements and inspection/test methods in lieu of specially written test procedures.</i>	PL-3029, § 12.2.4	None	
8S	<i>Inspection/test documentation should contain provisions for at least the following:</i>	8.2.7	None	
	<ul style="list-style-type: none"> <li>• identification of characteristics to be examined;</li> <li>• required qualifications of individuals who perform the examination;</li> <li>• a description of the examination methods including equipment and calibration requirements;</li> <li>• acceptance and rejection criteria;</li> <li>• suitable environmental conditions;</li> <li>• required safety measures; and</li> <li>• mandatory hold points, when required.</li> </ul>			
8T	<i>Inspection/test results should be evaluated and verified by authorized personnel to document that all requirements have been satisfied.</i>	8.2.8	None	
8U	<i>Records should, at a minimum, identify:</i>	8.2.9	None	
	<ul style="list-style-type: none"> <li>• item tested;</li> <li>• date of test;</li> <li>• tester or data recorder;</li> <li>• observations;</li> <li>• results and acceptability; and</li> <li>• action taken concerning any deviations noted.</li> </ul>			
8V	<i>The inspection and acceptance testing methods should establish requirements for a calibration system to ensure that measuring and test equipment (MT&amp;E) used to verify conformance to design requirements are of the proper type, range, accuracy, and are uniquely identified and traceable to their calibration data.</i>	8.5.1.6	None	

<sup>1</sup> Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SIITWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
8W	The method should ensure that adequate procedures for testing, retesting, adjusting, and recalibration of M&TE are maintained and documented by organizations performing inspection and testing functions.	8.5.1	None	
8X	When applicable, M&TE should be calibrated to standards traceable to the National Institute of Standards and Technology (NIST).	8.5.3	None	
<b>CRITERION 9: MANAGEMENT ASSESSMENT [110 § 830.120 (b)(3)(II)]</b>				
(b) (3) (I)	Managers shall assess their management processes.	9.1 9.2.1 9.3.1 SSOP-5014	None	
(b) (3) (I)	Problems that hinder the organization from achieving its objectives shall be identified and corrected.	9.1 9.2.1 SSOP-5014 PL-3035	None	
<i>Implementation Guide</i> <b>Criterion 9</b> Criterion 9 the customer's requirements and expectations. (PA)				
9B	This assessment should place emphasis on the use of human and material resources to achieve the organization's goals and objectives.	Not selected as a specific requirement		None
9C	The management assessment should include an introspective evaluation to determine if the entire integrated management system effectively focuses on meeting strategic goals.	9.2.1		None
9D	Criteria set forth in the Presidential Award for Quality, the Malcolm Baldrige National Quality Award, or the Quality Improvement Prototype Award may be used as a basis for management assessments.	Not selected as a specific requirement		None
9E	Managers should retain overall responsibility for management assessments.	9.2.3	None	
9F	Direct participation by managers is essential to the success of the process, since management is in the position to view the organization as a total system.	9.2.3	None	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MLE-STONE</u>
9G	<i>Management assessments should focus on the identification and resolution of both systemic and cultural management issues and problems.</i>	<i>PL-3029, § 12.3.1</i>	<i>None</i>	
9H	<i>Strengths and weaknesses affecting the achievement of organizational objectives should be identified so that meaningful action can be taken to improve quality.</i>	<i>PL-3029, § 12.3.1</i>	<i>None</i>	
9I	<i>Processes being assessed should include strategic planning, organizational interfaces, cost control, use of performance indicators, staff training and qualifications, and supervisory oversight and support.</i>		<i>9.2.2</i>	<i>None</i>
9J	<i>Effective management assessment should evaluate such conditions as:</i> <ul style="list-style-type: none"> <li>• the state of employee knowledge, motivation, and morale;</li> <li>• the amount of mutual trust and communication among workers;</li> <li>• the existence of an atmosphere of creativity and improvement; and</li> <li>• the adequacy of human and material resources.</li> </ul>		<i>9.2.2</i>	<i>None</i>
9K	<i>Direct observation of work is an effective method of management assessment. It provides the assessor with awareness of all interactions at a work location.</i>		<i>9.2.2</i>	<i>None</i>
9L	<i>Other methods of assessment are most effective when combined with work observation. These methods include:</i> <ul style="list-style-type: none"> <li>• interviews of workers;</li> <li>• reviews of documentation; and</li> <li>• conduct of drills or exercises.</li> </ul>		<i>9.2.2</i>	<i>None</i>
9M	<i>Management assessment results should be used as input to the organization's continuous improvement process.</i>	<i>PL-3029, § 12.3.1</i>	<i>None</i>	
<b>CRITERION 10: INDEPENDENT ASSESSMENT [10 § 830.120 (b)(3)(ii)]</b>				
(b)	Independent assessments shall be planned and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement.		<i>10.2.1.2</i> <i>10.3.1.3</i> <i>SSOP-0049</i> <i>SSOP-0709</i>	<i>None</i>

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

SITEWIDE QA PROGRAM COMPLIANCE ASSESSMENT

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
(b) (3) (ii)	The group performing independent assessments shall have sufficient authority and freedom from the line to carry out its responsibilities.	10.2.1.4.9 10.3.1 SSOP-0049 SSOP-0023	None	
(b) (3) (ii)	Persons conducting independent assessments shall be technically qualified and knowledgeable in the areas assessed.	10.2.3 SSOP-0049 QP-6.07	None	
<i>Implementation Criterion</i> <i>Criterion 10 (10A)</i>	<i>Management should establish and implement a method for independent assessment of organizations, programs, and projects in order to evaluate the performance of work processes with regard to requirements and expectations of customers and toward achieving the mission and goals of the organization.</i>	10.2.1	None	
<i>10B</i>	<i>The independent assessment process should use a performance-based approach with emphasis on results and with compliance viewed as the baseline.</i>	10.1	None	
<i>10C</i>	<i>Assessments should be conducted on activities that most directly relate to final objectives and should emphasize safety, reliability, and product performance.</i>	10.1	None	
<i>10D</i>	<i>Independent assessments may include such methods as inspections, peer and technical reviews, audits, surveillances, or combinations thereof.</i>	10.1	None	
<i>10E</i>	<i>The assessing organization should advise management and should report to a sufficiently high level in the overall organization to ensure organizational independence and access to appropriate levels of authority.</i>	10.2.1.4.8 10.3.1, 2nd bullet	None	
<i>10F</i>	<i>Personnel performing independent assessment should have the necessary technical knowledge to accurately observe and evaluate activities being assessed.</i>	10.2.3	None	
<i>10G</i>	<i>Personnel performing assessments should now have direct responsibilities in the areas they are assessing and should consider the organizations being assessed as customers for feedback concerning observations of performance.</i>	10.2.4 PL-3029, § 12.3.2	None	
<i>10H</i>	<i>The types and frequencies of independent assessments should be based on the status, complexity, and importance of the activities or processes being assessed.</i>	10.2.6	None	

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program*, Rev. 3, effective 11/30/94.

<u>ITEM NO.</u>	<u>TITLE OR SUBJECT</u>	<u>COMPLIANCE DOCUMENT</u>	<u>COMPLIANCE ACTIVITY OR COMPENSATORY ACTION</u>	<u>MILESTONE</u>
<i>10J</i>	<i>The criteria used for assessments should describe acceptable work performance and should promote improvement of the process or activity.</i>	<i>10.2.5</i>		<i>None</i>
<i>10J</i>	<i>Assessments should also address management processes which affect work performance such as planning, program support, and training.</i>	<i>PL-3029, § 12.3.2</i>		<i>None</i>
<i>10K</i>	<i>Personnel performing assessments should focus on improving output, quality and process effectiveness by emphasizing continuous improvement methods.</i>	<i>PL-3029, § 12.3.2</i>		<i>None</i>
<i>10L</i>	<i>Assessment personnel should not reinterpret or redefine the requirement specified in approved programs.</i>	<i>10.3.4</i>		<i>None</i>
<i>10M</i>	<i>The assessors' responsibilities include:</i> <ul style="list-style-type: none"> <li>• evaluating work performance and process effectiveness;</li> <li>• identifying abnormal performance and potential problems;</li> <li>• finding opportunities for improvements;</li> <li>• documenting and reporting results; and</li> <li>• verifying satisfactory resolutions of reported problems.</li> </ul>	<i>10.2.2, 10.3.4</i>		<i>None</i>
<i>10N</i>	<i>The independent assessment process should include verification of the adequacy of corrective actions, including actions identified to prevent recurrence or to otherwise improve performance.</i>		<i>10.2.2, 9,10</i>	<i>None</i>
<i>10O</i>	<i>Assessment results should be documented, presented to the organization that was assessed, and provided to the appropriate levels of management for review.</i>		<i>10.3.1, 4th &amp; 5th bullet</i>	<i>None</i>
<i>10P</i>	<i>Strengths and weaknesses affecting the quality of process outputs should be identified so that meaningful action can be taken to improve quality.</i>		<i>10.2.2, 9</i>	<i>None</i>
<i>10Q</i>	<i>Independent assessment which verify good performance in some or all areas of an organization may result in a reduction in the frequency and depth of future assessments.</i>		<i>10.2.6</i>	<i>None</i>
<i>10R</i>	<i>Areas of poor or questionable performance should receive increased attention.</i>		<i>10.2.6</i>	<i>None</i>
<i>10S</i>	<i>Lessons learned from the assessment process should be communicated to other organizations with similar activities or concerns.</i>		<i>10.2.10</i>	<i>None</i>
<i>10T</i>	<i>Identified action items should be tracked for resolution and evaluated to determine whether similar deficiencies exist elsewhere.</i>		<i>10.2.7</i>	<i>None</i>
				<i>10.3.1, 6th bullet</i>

Unless otherwise noted, all references in this column refer to RM-0012, *Quality Assurance Program, Rev. 3*, effective 11-30-94.

## COMPLETED CORRECTIVE ACTIONS

This attachment contains examples of the FDF Activity Program assessment checklists (PL-3029, Revision 0) which support the Activities, Compensatory Actions, and Milestones listed in Attachment 4 (PL-3029, Revision 0). The following Corrective Action Reports address the corrective actions taken for closure of the identified milestones listed in Attachment 4 (PL-3029, Revision 0).

### ACAM 94-001

**FERMCO Corrective Action Report (CAR) 94-076, Safe Shutdown Program.**  
**FERMCO Corrective Action Report (CAR) 94-077, Waste Programs Management Division.** CAR 94-076 closed 2/27/95 and CAR 94-077 closed 2/28/95.

The Safe Shutdown organization documents has been revised to reference site records management procedures, per the tracking document, CAR 94-076.

The organization responsible for Material Handling & Storage activities has developed and implemented a division level procedure that describes the internal records management program, identifies statewide interfaces, and references driver site records management procedures, per the tracking document, CAR 94-077.

=====

### ACAM 94-002

**FERMCO Corrective Action Report (CAR) 94-056.** CAR 94-056 closed 2/9/95.

Site Plan PL-3035, "Configuration Management Implementation Plan", and Engineering procedure ENG-12-5004, "Configuration Management", have been issued which establish the site's process for assigning Performance Grades for all structures, systems, and components (both purchased and manufactured/assembled at the FERMCO). "Identifying Quality Assurance Program Requirements for Quality (Risk) Levels", will be revised to reflect these changes. These replace SM-(XXX). These documents, in conjunction with RM-0012, Rev. 3, will standardize the assignment of quality levels based on the Engineering Performance Grade. This will bring about the desired consistency to the procurement processes.

Engineering Division has developed a training schedule for their newly developed plan and procedure by 12/01/94. Training will be conducted according to schedule. All other actions will be implemented by 03/15/95.

Quality Assurance has assigned one person who has the authority and responsibility to assign Quality Levels for procured materials. This person frequently utilizes Engineering subject matter experts in assigning quality levels. These activities are considered to be sufficient to keep the inconsistency to a minimum and to meet the intent of the requirements until the new procedures are in place and implemented.

=====

### ACAM 94-003

**CAR 94-075.** CAR 94-075 closed 3/31/95.

Quality Assurance Division has developed a procedure which meets the intent of the commitment listed above, and trained management to the requirements of that procedure.

## LIST OF HAZARD CATEGORY 2 &amp; 3 FACILITIES

**NOTE:** The facilities listed for information below are Hazard Category 2 or 3 facilities, based on FEMP-2352. *FEMP Hazard Survey and Preliminary Hazard Categorization*. That document describes each facility in greater detail, and in its current form supersedes this attachment. (For example, the Pilot Plant actually comprises Buildings 13A/B/C/D, 37, 54A/B/C, and 74U.)

Facility Name	Facility No.	Haz. Cat.	Facility Category
Plant 1 Storage Shelter	1B	2	nuclear
Ore Refinery Plant	2A	2	nuclear
Refinery Sump Control Building	2B	2	nuclear
Bulk Lime Handling Building	2C	2	nuclear
Metal Dissolver Building	2D	2	nuclear
NFS Storage and Pump House	2E	2	nuclear
Cold Side Ore Conveyor	2F	2	nuclear
Hot Side Ore Conveyor	2G	2	nuclear
Plant 1 Conveyor Tunnel	2H	2	nuclear
Ozone Building	3B	2	nuclear
NAR Control House	3C	2	nuclear
NAR Towers	3D	2	nuclear
Hot Raffinate Building	3E	2	nuclear
Harshaw Digestion Fume Building	3F	2	nuclear
Refrigeration Building	3G	2	nuclear
Refinery Sump	3H	2	nuclear
Combined Raffinate Tanks	3J	2	nuclear
Electrical Power Center Building	3L	2	nuclear
Plant 4 Warehouse	4B	2	nuclear
Metal Production Plant	5A	2	nuclear
Plant 5 Ingot Pickling	5B	2	nuclear
Plant 5 Electrical Substation	5C	2	nuclear
Plant 5 West Derby Breakout/Slag Milling	5D	2	nuclear
Plant 5 Filter Building	5E	2	nuclear
Plant 5 Covered Storage Pad	5F	2	nuclear
Plant 5 Ingot Storage Shelter	5G	2	nuclear

## QA RULE IMPLEMENTATION PLAN

## ATTACHMENT 4

Page 2 of 4

## LIST OF HAZARD CATEGORY 2 &amp; 3 FACILITIES

PL-3029

Effective Date: 11-30-97

Revision No. 1

Facility Name	Facility No.	Haz. Cat.	Facility Category
Metals Fabrication Plant	6A	2	nuclear
Plant 6 Covered Storage Area	6B	2	nuclear
Electrostatic Precipitator, South	6C	2	nuclear
Electrostatic Precipitator, Central	6D	2	nuclear
Electrostatic Precipitator, North	6E	2	nuclear
Salt Oil Heat Treatment Building	6F	2	nuclear
Sump Building	6G	2	nuclear
Recovery Plant	8A	2	nuclear
Maintenance Building	8B	2	nuclear
Rotary Kiln/Drum Reconditioning	8C	2	nuclear
Railroad Filter Building	8D	2	nuclear
Drum Conveyor Shelter	8E	2	nuclear
Old Drum Washer	8F	2	nuclear
Pilot Plant, Wet Side	13A	2	nuclear
Pilot Plant Maintenance Building	13B	2	nuclear
Sump Pump House	13C	2	nuclear
Thorium Tank Farm	13D	2	nuclear
General Sump	18B	2	nuclear
Chemical Warehouse	30A	2	nuclear
Drum Storage Warehouse	30B	2	non-nuclear*
K-65 Storage Tank (North Silo)	34A	3	nuclear
K-65 Storage Tank (South Silo)	34B	3	nuclear
Radon Treatment System Building	34C	3	nuclear
Metal Oxide Storage Tank (South)	35B	2	nuclear
Pilot Plant Annex	37	2	nuclear
Incinerator Building	39A	2	nuclear
Waste Oil Decant Shelter	39B	2	nuclear
Six to Four Reduction Facility	54A	2	nuclear
Pilot Plant Warehouse	54B	2	nuclear

## QA RULE IMPLEMENTATION PLAN

ATTACHMENT 4

Page 3 of 4

## LIST OF HAZARD CATEGORY 2 &amp; 3 FACILITIES

PL-3029

Effective Date: 11-30-97

Revision No. 1

Facility Name	Facility No.	Haz. Cat.	Facility Category
Pilot Plant Dissociator Shelter	54C	2	nuclear
Slag Recycling Building	55A	2	nuclear
Slag Recycling Pit/Elevator	55B	2	nuclear
CP Storage Building	56A	2	nuclear
Quonset Hut #1	60	3	nuclear
Quonset Hut #2	61	3	nuclear
Thorium Warehouse	64	3	nuclear
Plant 5 Warehouse(old)	65	3	nuclear
Pilot Plant Warehouse	68	2	nuclear
General in-Process Warehouse	71	2	nuclear
Plant 2 East Pad	74A	2	nuclear
Plant 2 West Pad	74B	2	nuclear
Plant 8 East Pad	74C	2	nuclear
Plant 8 West Pad	74D	2	nuclear
Plant 4 Pad	74E	2	nuclear
Plant 5 East Pad	74G	2	nuclear
Plant 5 South Pad	74H	2	nuclear
Plant 6 Pads	74J	2	nuclear
Building 65 West Pad	74L	3	nuclear
Building 64 East Pad	74M	3	nuclear
Plant 8 Old Metal Dissolver Pad	74Q	2	nuclear
Plant 8 North Pad	74R	2	nuclear
Plant 1 Storage Pad	74T	2	nuclear
Pilot Plant Pad	74U	2	nuclear
Incinerator Building Pad	74W	2	nuclear
Finish Product Warehouse	77	2	nuclear
Plant 6 Warehouse	79	2	nuclear
Plant 8 Warehouse	80	2	nuclear
Plant 9 Warehouse	81	3	nuclear

## QA RULE IMPLEMENTATION PLAN

## ATTACHMENT 4

Page 4 of 4

## LIST OF HAZARD CATEGORY 2 &amp; 3 FACILITIES

PL-3029

Effective Date: 11-30-97

Revision No. 1

Facility Name	Facility No.	Haz. Cat.	Facility Category
Tension Support Structure (2)	TS-4	2	nuclear
Tension Support Structure (2)	TS-5	2	nuclear
Tension Support Structure (2)	TS-6	2	nuclear

## notes

- (1) Non-nuclear facilities which exceed the RQ limits of 40 CFR 302 for asbestos only are identified as non-nuclear with an asterisk.
- (2) Tension Support Structures are mounted and assembled as the need for them changes.
- (3) OU-1, Waste Pits Remediation Action Project. Pits 1 through 6 contain inventories of radiological materials that exceed Hazard Category 3 threshold specified in DOE-STD-1036-91; however, these materials are confined in lined covered pits which pose no credible mechanisms for release to the atmosphere. It is recognized that once remediation activities are proposed for the removal of pit materials, a separate safety analysis will be required.